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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/540,892	03/31/2000	Miyuki Kawataka	FUJG 17.068	2040

26304 7590 06/19/2003

KATTEN MUCHIN ZAVIS ROSENMAN
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER
MUNOZ, GUILLERMO

ART UNIT	PAPER NUMBER
2634	4

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Samson Helfgott
Helfgott & Karas PC
60th Floor
Empire State Building
New York, NY 10118-6098

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PRS

Office Action Summary	Application No.	Applicant(s)	
	09/540,892	KAWATAKA, MIYUKI	
	Examiner	Art Unit	
	Guillermo Munoz	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,7-9,11 and 14* is/are rejected.

7)☒ Claim(s) *3,5,6,10,12,and 13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 March 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4, 7-9, 11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al (U.S. Patent Number 5,592,518) in view of Miyazaki et al. (U.S. Patent Number 4,574,377).

In regards to claims 1 and 8; Davis et al teaches a frame synchronization circuit wherein:

- "The system includes a number of correlators for generating a signal for each comparison to indicate a degree of correlation between the bit patterns and at least a portion of the parallel data word. The system also includes a synchronizer for selecting an appropriate correlation signal which indicates detection of the predetermined frame synchronization pattern"(col.3, lines 8-14).

The number of correlators anticipate claimed first and second synchronization pattern detecting unit that detects a first pattern and a second pattern (a plurality of patterns) each similar to a predetermined synchronization pattern in input data within a predetermined period of time in claim 1 and claimed plurality of synchronization patterns detection unit that detects a plurality of patterns each similar to a predetermined synchronization pattern in input data within a predetermined period of time in claim 8.

- "Referring now to FIG. 4, a block diagram illustrating the components of the frame sync block of FIG. 1 (block 34) is shown. The frame sync block accepts pattern match signals from the correlators, priority encodes them, and looks for the repetition of the highest priority strobe one frame period later"(col.8, lines 22-36).
- "Within each category, a bit shift of 7 has the highest priority and a bit shift of 0, the lowest"(col.8, lines 54-56).

Davis et al teaches a frame sync block 34 which includes a priority encoder within the frame sync block that priority encodes 7 correlators related to a sync pattern and prioritizes a correlator relating to a 7 bit shift with the highest priority. Furthermore, Davis et al teaches determining which correlation is recognized if multiple indications are received. However, Davis does not teach selecting a correlation output of a lower priority correlator, when multiple indications are received, if the highest priority correlator, then fails to detect a sync pattern.

Miyazaki et al teaches another synchronization method wherein:

- "According to another aspect of the present invention, there is provided a synchronization apparatus in redundant TDMA communication equipment having at least an active TX synchronization circuit and a standby TX synchronization circuit, each TX synchronization circuit includes a TX frame counter for counting each clock signal and for supplying a TX frame timing signal when the count reaches a predetermined value"(col.1, lines 57-64).
- "When failure is detected in the active circuit 2a, synchronization of transmission signals is maintained by switching to the standby circuit 2b"(col.5, lines 30-33).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to synchronize the correlators, providing indicators to the priority encoder, of Davis with redundant circuitry in view of Miyazaki et al. for the purpose of selecting a lower priority correlator in the event that the highest priority correlator loses sync, thereby, avoiding a KICK_FS indicator.

In regards to claims 2 and 9; as applied to claims 1 and 8 above, Davis et al teaches a frame synchronization circuit wherein:

- "The system includes comparators for substantially simultaneously comparing each parallel data word with a number of predetermined parallel bit patterns. Each bit pattern corresponds to a different representation of the frame synchronization pattern which provides for characterization of the digital signal being received and provides for determination of the position of the frame synchronization pattern within the parallel data word"(col.2, lines 66-67 and col.3, lines 1-6).

The different representation of the frame synchronization pattern anticipates claimed synchronization by first frame synchronizing unit differs from synchronization by second unit in claim 2 and claimed positions of the plurality of patterns differ from each other in claim 9.

In regards to claims 4 and 11; as applied to claims 1 and 8 above, Davis et al teaches a frame synchronization circuit wherein:

- "In the Search state, a correlation indication causes the frame sync block to enter the Check state. A bit count corresponding to the frame length is then started. Preferably, each frame contains 1279 bytes, or 10,232 bits, to accommodate the sync pattern, Reed-

Solomon coding, and data. When the bit count is completed, correlation corresponding to the original data type is checked. If a corresponding correlation is not found, operation reverts to the Search state"(col.5, lines 16-23).

The correlation to the original reed-solomon coded data anticipates claimed first error detecting unit detects that the first position is different from the position of the predetermined synchronization pattern based on information other than the synchronization pattern in the frame in claims 4 and 11.

In regards to claims 7 and 14; as applied to claims 1 and 8 above, Davis et al teaches a frame synchronization circuit wherein:

- "Within each category, a bit shift of 7 has the highest priority and a bit shift of 0, the lowest"(col.8, lines 54-55).

The 8 correlators anticipate claimed third error detection unit that detects that the first position is different from the position of the predetermined synchronization pattern, based on a bit error rate in claims 7 and 14.

Claim Objections

Claims 3, 5, 6, 10, 12, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Munoz whose telephone number is 703-305-4224. The examiner can normally be reached on Monday-Friday 8:30a.m-4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9313 for regular communications and 703-872-9313 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

Guillermo Munoz

GM
April 25, 2003

STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600